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Kate Maguire

Transdisciplinarity as a global anthropology of learning

Introduction

In his opening page of his text book, *What is Anthropology* (2004), Eriksen draws on the wisdom of two great minds over a century apart. *Make everything as simple as possible. But not simpler.* (Einstein); *He who speaks no foreign language knows nothing of his own.* (Goethe). In doing so, he captures two attitudinal tenets fundamental for the practice of anthropology: the *emic* principle and the *etic* principle. The emic principle is a non-judgmental approach to observing and entering the context of the 'other' not with the researcher focused intention of understanding what is going on but of clarifying the understanding the member of the culture has about their own context, their artefacts, rituals and practices, how relationships are formed and meaning sustained through what constitutes that context. The observations of the other are not skewed by the anthropologist's own lens. What is reported simply at first appears simple, but is not. The *etic* principle can be summed up as the function of what is learned from a new 'culture' is to question the understanding of the 'culture' from which the anthropologist has arrived. The new understanding that emerges in these bridging spaces between difference thereby contributes to knowledge of the universality of human behaviour. These two tenets have, from seafarers and traders, to anthropologists and archaeologists with a curiosity to learn about what exists outside their own experience, have shown themselves to be sound approaches to both contributing to and navigating complexity. I suggest that anthropology has much to offer our contemporary occupations with cohesion in a global context. This chapter focuses on two cultures of knowledge: the culture of the university which has over the last two hundred years held claim to discipline specific theoretical knowledge based on rigorous research, and organisations outside of the university who have claim to practitioner/experiential knowledge across a range of disciplines and sectors. In recent years, much like colonial influences on discreet islands, market forces have challenged the culture of the university and its place in the new order. In this chapter I will draw on the experiences of working with senior professionals who come into higher education to develop research skills which will enable them to bring about 'change' in work practices and organisational cultures outside of higher education.

To gather proofs or evidence of the reliability of meaning making out of what one perceives, one theorises and hypothesises using existing data. However, theorising is predicated on being able to conceptualise that which is the focus of the examination. Conceptualising practices in cultures outside the university is a challenge which confronts university facilitators of research that takes place within those cultures but under university guidance, rituals and practices which differ from the location of the research. The flourishing of such cultures external to the university is premised on fast connectivity to knowledge and knowledge application, to markets and to people in ever changing environments. This connectivity is scaffolded by the interconnectivity of diverse cultural practices internal and external to each culture.

Drawing on Bateson's notion of the ecology of the mind (1973), that is, that ecosystems engage in adaptive processes, cultural ecologies that sit outside of higher education institutes yet also surround them and recruit from them, have developed the capacity to engage with adaptive processes in a way which is more rapid, complex, agile and dynamic than the cultural ecology of a university, with both positive and negative consequences. It is not enough for universities to theoretically engage with the notion of connectivity to external ecologies as if they are constantly viewing at a distance but to actively contribute to the input that causes the culture to adapt and to the processes of that adaptation; and to revise and increase their own adaptive processes and rate of response. Such cooperation can enhance the chances of any change achieving benefit for the many rather than the few.

In this chapter, encouraged by the work of Hasse (2015) and Boulton et al (2015), I am proposing a conceptualisation of learning as a way of understanding complexity and as an attitude towards it, to clarify how higher education can contribute to the flow, direction and dynamism of interconnectivity. This conceptualisation pulls together Hasse's notion of an anthropology of learning with discourses on transdisciplinarity and complexity to arrive at transdisciplinarity as a global anthropology of learning. To facilitate movement then from conceptualisation to practical application through new researchers, I will also be proposing a re-contextualisation of the notion of 'teacher' tasked with the skilling of the agent/agents of 'change' in this new world of complexity drawing on ideas from anthropology, translation studies and hermeneutics.

The context of knowing from practice

If higher education is to negotiate seriously for an influential role in the global superorganism which represents our world today, it has to embrace the reality of

knowledges, not as islands, but as 'knowing' which emerges from the interconnectedness of practices in relationship to objects and the making sense of practices in time, space and place; in other words, what emerges from the interplay of structure and processes. Nicolini's view that '*claiming the world we live in is the result of practices does not make it less 'solid' or 'relative'*'. (2013:3) is a challenge for those who believe that truth, reality and knowledge have to lend themselves to being numerically measured rather than assessed by judgment and independent thought before they can be acted upon. There is the seduction of believing that if we share the same technological devices to engage with each other in knowledge exchange then, in effect, we are speaking the same language and can reduce everything to measurement. Technologies are not new. Digital technologies have precursors in cooking pots, musical instruments and stones grinding grain. In this context Hasse (2015) reminds us that technological artefacts are '*not stable cultural resources that retain their word meaning when they travel through the world, when they move between cultural spaces...People learn about the meanings of artefacts when they handle them in their own practised –based learning in local activities,...People working together with the same kinds of artefacts develop similar agential knowing, and they also learn from the artefacts in ways that expand their being-in-the-world*' (2015:280). In other words it is not the artefact itself but its flexibility, how it is used and for what purpose that disrupts or reinforces the meaning making relationships of our formative or adopted culture and stimulates adaptive responses. The adaptive capacity to respond appropriately is the life source of an organism. As every anthropologist knows, and which Nicolini highlights (2013:3), practices are *also very resilient and often difficult to change because, qua practices, they are taken for granted and often considered as part of the 'natural' order of things*. An anthropological view would say that these practices have become ritualised, in some cases to the extent that few can remember in what context they arose, for what purpose and why have been sustained over time. Their status has become 'sacred' or untouchable and unquestioned. Such 'sacred', ritualised practices contribute to the atrophy of an organism which include the practices and attitudes of discipline silos in higher education. For Nicolini, however, *Practice theories are inherently relational and see the world as a seamless assemblage , nexus, or confederation of practices- although not all having the same relevance* (2013:3). For Hasse, *A practised place is a habitat where materials and meanings continuously emerge and affect the cultural ecology* (2015:12). The stimuli of that emergence, or indeed its inhibitors, are both internal and external and identifying the inhibitors and encouraging the emergence in each context are areas to which researchers and facilitators of research can give more focused attention as the thriving of an organism in itself and within a wider global network depends on it .

Technology therefore is an artefact, an object that can be a device for learning and communication and can have an impact on cultural practices within and between different cultural hegemonies. Technology can facilitate information exchange but the differential in adaptive processes within and between cultures can create greater discontinuity between them and inhibit transformative changes beyond the *emic–etic* tension. The drive to respond to this rapid increase in connectivity has offered fertile ground for conceptualisations of complexity to assist our navigation and facilitation of the knowledge flow between these different cultural entities and their practices through attending to the capacity building of adaptive processing systems.

Adaptive capacities and Complexity

Boulton et al (2015), by entitling their publication *Embracing Complexity* have confronted the trend for discourses on *managing complexity* which are usually accompanied by an array of bureaucratic systems to achieve that.

Complexity emphasizes and incorporates the interconnected, interpenetrating, diverse, and sometimes diffuse qualities of most natural and social systems. This is a so-called 'ontological stance', a view of how the world works. We are describing the nature of things as systemic, complex, and affected by the particularity of the situations we are in and by the particularity of history (2015:35).

Rather than trying to control and marshal what is and is not knowledge, this concentration on the interconnectedness of things and on 'particularity' as a key component of understanding how complexity operates, strongly echoes the thinking of twentieth century anthropologists who profoundly changed what the West considered as constituting knowledge by supplying extensive data on diversity that could not be ignored. It took several more years to rescue anthropological case studies from the realm of 'peculiarity', where they had been relegated, to the realm of 'particularity' where they rightfully belong. As will be seen further on, transdisciplinarity shares this 'so called ontological stance', more commonly referring to 'particularity' as 'contextuality'. Ecological systems all have their own particularities which impact their capacities to adapt and, without adaptation, the ecology can atrophy. Therefore, the search for resilience of the organism or cultural ecology has become as feverish and mythical as the search for Parsifal's holy grail or the shaman's for enlightenment or the legendary hero for what will save his people. Managing complexity seeks total stability and certainty which will render the system stagnant. It is motivated to a large extent by fear of uncertainty; embracing complexity recognises the fluid nature of the

interaction of things, the opportunities presented by uncertainty and the importance of the health of the adaptive capacities of the entity. For Allen (1997:17) in Boulton et al (2015:39) resilience and the capacity to adapt are interrelated.

The capacity to adapt and respond to external and internal variation, although requiring some "instability" can be the origin of the system's resilience. This is an example of the complexity of some of these issues in which adaptability may allow stasis in a broader sense , and rigidity may lead to collapse.

Boulton et al (2015: 39) propose that adaptability and resilience in fact *require diversity, variation and fluctuations*. Drawing on Allen's publication in 2001, they provide an enriched description of adaptive capacity.

Allen (2001) describes the need for this redundancy (that is having more options or pathways that are necessary to function like a machine) as the law of excess **diversity**. He is saying that unless there are more pathways or options (called **degrees of freedom** by mathematicians) than are required to operate efficiently, there is no resilience to changing circumstances. However much diversity seems requisite (Ashby, 1956) for a system to function at a given time, more than this will be required to cope with what is likely to happen in the future.

Twentieth century anthropologists were witnesses to the rapid erosion of cultural ecologies through external factors which overwhelmed their historically embedded systems. These systems had been sustained for centuries through rituals and practices, through a relationship with temporality which we do not have today and a minimum of contact with external factors. Anthropologists delved into a number of disciplines including ecology and psychology to increase their understanding of the processes of the rise, maintenance and decline of a cultural system. Institutes of higher education are cultural ecologies, as are other organisations and societies of practice wherever they are located on the planet with their own particularities and differing adaptive capacities. Part of the function of an institute of higher education is, in a sense, to be an anthropologist of other cultural ecologies, to reflect on what it finds and to contextualise it in the accumulated knowledge it holds in a range of disciplines. However it too is subject to external factors and vulnerable to stagnation and atrophy if the knowledge it holds and the rituals it requires are no longer relevant to the conditions in which other ecologies sit and function. The higher education institute needs to adapt and to do that requires it to become more closely connected to other ecologies.

Conceptualising the world as complex helps us to explore it more usefully and to theorise it more reliably so that our contributions have both an intrinsic and extrinsic value to the whole superorganism and those who populate it. I would argue that embracing complexity is an attitude to knowledge and to the world which deeply resonates with that of transdisciplinarity and anthropology.

Transdisciplinarity and Anthropology

I am influenced in my thinking about TD by my formative 'discipline' which is indeed anthropology and enjoy the anthropologist Catherine Hasse's view (2015) that research is an anthropology of learning and that TD is, in itself, both a means and a metaphor for connectivity through the 'dissolving' of obstacles to knowledge and knowing (Somerville and Rapport 2002).

I am interested in its facility as a conceptualisation of practice that informs the methodology of the anthropology of global learning about cultural ecologies. The eminent anthropologist Gregory Bateson (1973) who, with Margaret Mead, observed and recorded Pacific cultures over long periods of time, proposed the idea of ecologies in which space, place, temporality, the animate and inanimate give rise to adaptive practices and formations of identity. Julian Steward is credited with coining the phrase 'cultural ecologies' in 1955 (Steward 1973) and Finke (2013) has advanced Bateson's and Steward's ideas in his work on transdisciplinarity. Manderson (2000), an Australian legal scholar, writes of transdisciplinarity as an anthropologist might when he states that *TD examines a particular site or sites of interest without a particular disciplinary strategy in mind. It is the site as observed and not the intellectual tradition of the observer which determines the approach* (2000:87) I agree with him that areas such as 'city' or 'drugs' provide places of conjunction between such a variety of disciplinary issues that no disciplinary or interdisciplinary framework can do justice, rather it is only by treating every discipline as relevant but never a hegemonic structure that an understanding of the structure, function and meaning of the ecology of that site can begin to be understood.

TD has proved to be a contested term: it is an approach to knowledge; it is another iteration of action research; it is a response to complexity; it will save the planet; it dismisses disciplines; it unites disciplines; it is beyond disciplines; it is a collaborative research approach. Such discourses on the one hand move us towards clearer thinking and criteria. On the other, an increasingly refined distillation can shift TD closer to prescription and restriction, new rituals for old, the antithesis of the source of its emergence or rather its re-

emergence. Transdisciplinarity conceptualised as working across ethnic and knowledge cultures in order to illuminate and change our own, is fundamental to 20th century anthropology (Mead 2004a, Maguire 2015a, Levi-Strauss, 1974). It can also be seen as an attempt to reconnect a range of knowledges which were split off into discipline islands by the rapid advance of science in the late 19th century, a development which Foucault (1995) saw as the antithesis of knowledge. As a research approach it is identified with groups working collaboratively to solve complex problems in which the focus is on the collaboration of thinking and ideas between different work and knowledge cultures rather than, as in some forms of action research, the focus being on the development of the practitioner through facilitating learning loops for a specific work culture to solve problems within the culture. Manderson (2000:87) offers this useful translation of what TD is and what it does.

Creates new objects of study by examining the themes or aspects which different disciplines have in common and therefore assume without interrogation. Transdisciplinarity is to disciplines as metaphysics is to physics; transdisciplinarity is to disciplines as factors are to numbers...Examines a particular site or sites of interest without a particular disciplinary strategy in mind...Treats different disciplines as verbs rather than nouns. Different disciplines (or ways of approaching a subject) are not reified, but are treated as being active in each other. ..

TD continues to struggle in some academic quarters with academic validity because it most commonly defines itself as an approach to knowledge rather than a discipline. This claim of 'an approach to knowledge' would not have been possible for social/cultural anthropology in the twentieth century although, I would suggest, it more accurately describes its intentions and methodology. It needed to be part of the higher education context of the discipline paradigm or it would have been marginalised as a hobby for eccentric individuals interested in exotica. Franz Boas, regarded as the founder of social anthropology, and mentor of Margaret Mead, did much to establish social anthropology as a discipline. However, Mead herself was often questioned as to her credentials as an academic and the field of cultural/social anthropology was challenged as a credible discipline (Maguire 2015a, Price 2004). Anthropologists, as ethnographers, developed approaches to understanding human behaviour through long immersion in societies and critical reflection of their observations and encounters. As ethnologists, they drew together numerous accounts in order to have something useful to say on the universals of human behaviour and what came to be termed as the human condition. Anthropologists brought back ideas to Europe and America that unsettled, in a substantial way, the foundations of political and social hegemonies which

were the justification for a range of exclusions including gender, race and mental health. Fear of the attitudes which many anthropologists held towards difference and of their advocacy to respect the cultures of others was enough to have several American anthropologists during the Cold War arrested, or lose tenure as academics or put under suspicion of being anti-American (Price 2004).

Similarly TD has emerged with an attitude of positive, non-judgmental engagement with our world. It is focused on bringing that attitude to bear on tackling the big problems such as climate change, diminishing resources, forced migrations and wealth imbalance and to underpin research's social responsibility by ensuring inclusion of the perspectives and knowledge of the non-discipline subject specialists who represent the people and practitioners who inhabit those spaces. In terms of global warming and the threat of tsunamis, for example, that would be those who occupy and make a living from the littoral spaces of the planet: the fishermen, community leaders and builders in addition to climatologists, geologists, meteorologists, public health specialists and others with vested interests.

TD challenges our traditional relationship to the theoretical object of disciplines creating the conditions for a different kind of learning and knowledge to emerge. Transdisciplinarity in its intention seeks knowledge which does not emerge from ontological and epistemological narcissism and an application that intends a more even distribution of the benefits of the solution. In this sense it is a finer iteration of anthropology. Ethnographers on the whole did not actively seek to divest themselves of the formulations and theoretical lenses shaped by their own cultures but, through the relational process with this new 'object' of 'the other', the vast contradictions which arose led to new learning and perspectives which they disseminated.

Learning what matters: recontextualising: researcher as ethnographer, teacher as translator

We work in the cultural ecology of a university to develop researchers in practice in cultural ecologies outside of the university where the language is one of sectors, agencies, units and departments rather than disciplines, and the rituals are diverse and embedded but subject to sudden change. The agency of the practitioner in these spaces is not as an advocate of a single discipline culture. Modern practitioners today consistently interact with a multitude of practices that are in constant adaptive processes with each other within their cultural ecology and influenced by the practices and outcomes of external cultural ecologies. In such

an environment, a complex problem may be identified that could de-stabilise the existing ecology, thus the everyday objective of any ecology is to keep all the internal parts connected as a stable base for internal and external exchanges to take place that might enable a wider and more informed lens on what may turn out to be a re-identification of the problem. Such a re-identification requires a re-contextualisation of the issue and the development of a set of new practices as an adaptive response. Obstacles to that process may include sacred rituals and beliefs which replicate rather than generate new cultural memes and practices. The capacity of the adaptive processes, in this context, then are minimal which can lead to atrophy. An example would be reasoned argument developed within a set of beliefs and practices and ritualised over time (replicating system) without ever challenging the original premise and purpose out of which such beliefs and practices arose (generative system). As structures and processes relate to fundamental human needs such as belonging, safety and identity (Maslow 2014) there is fear of the unknown and of potential loss of identity, meaning, cohesion and certainty if the premise itself is challenged.

Although cultural ecologies are adaptive to external and internal influences to survive, this adaptive process can vary in terms of degree of adaptability. On the whole, 'agents of change' are usually those who wish to enhance their culture's adaptive processing systems to make them adapt appropriately to stimuli without losing entirely the culture's function and identity. This is not the same as setting out on a mission to 'change the culture'. In higher education, the facilitator (in this case the supervisor) of this 'enhancement of adaptive processing' which is going to take place within a cultural ecology, through the agent (in this case the 'researcher'), is part of any potential adaptive process and indeed its success or failure. Awareness of this is a responsibility which the supervisor needs to recognise and to bring this into the awareness of the researcher. Such awareness motivates the development of anticipatory skills through a more sophisticated conceptualisation of the researcher's context and more rigorous attention to the appropriateness of methods and the implications of impact. As Joseph Campbell (1990) pointed out in his analysis of myths, the one who seeks to make changes and goes on a transformational journey to find what is needed by their society, often returns to that society with the 'treasure' not as the hero but a danger to the culture that must be expunged. Is it not then our role as facilitators of research in higher education, which is intended to bring about 'change' in cultural ecologies outside higher education, to take this responsibility seriously and to critique our own professional practice and the expectations we have of ourselves and which others have of us?

I suggest that the first step in this TD as an anthropological approach to global learning is a conceptualisation of professional practice within any cultural ecology, including the professional practice of research facilitators and teachers within higher education, which can both recognise the and work with the capacity of adaptive processing systems. TD is a conceptualisation that can map out the complexities, foreground the communication pathways, reveal the areas requiring attention, identify where communication and exchange have become bottlenecked, and may more accurately anticipate the implications of change. Critical reflection is one of the crafts that can both map-make and map-read professional practice. For those undertaking or about to undertake research in a work environment outside of but through higher education, it can influence the choice of research methodology and define more clearly the purpose, the feasibility and the appropriate knowledge fields to explore. Successful change and innovation fundamentally require collaboration and that can only take place if the exchange channels are fluid and flexible. TD has highlighted in its discourses obstacles to fluid exchange which fill out the conceptual map including: trust (Harris & Lyon, 2013, Lyon and Mollering 2012); coherence not unity (Ramadier 2004) ; negotiation not 'research' ; relationship with temporality not linear time (Maguire 2015a) and place and space no longer embedded in dwellings (Auge, 2009) .

An anthropology of learning, is a learning about what matters (Hasse 2015) and in roles as facilitators of research we need to find what matters out there to the people who live and work in fast moving environments in layered contexts from NGOs to global corporations which include mattering as a human being, not only as an instrument. Engaging with the anthropological perspective is valuable as we strive for more synergy between ways of knowing because anthropology is not, in the traditional sense, a discipline. It is a seeker and observer of human activities, clustered together in groups, on islands, in factories, in relationships and manifested and sustained in rituals that seem to hold the group together in common identity and often prevents others from entering unless for the purposes of alliances.

Our curiosity as researchers, supervisors of research and teachers is about what facilitates the relationships between cultural islands and how epistemes are transferred. This brings to mind the role of merchants, the seafarers who communicated between islands regularly pollinating epistemes and contributing in no small part to the networks that link us together increasing the layers of knowing in which we exist and can thrive. Therefore the anthropology of learning is how to navigate difference in order to negotiate the harnessing of knowledge and the generation of new knowledge for the things which matter.

In my conceptualisation fantasy, TD, in this anthropology of learning, seeks out the smaller narratives to enlighten and challenge even the grand narratives that have marginalised as much as included and have been examples of disabling as well as enabling. McDermott and Varenne (1995), in their concept of culture as disabling, challenge the notion that culture is a container of coherence, postulating that the container leaks as the coherence of a culture is crafted from the partial and mutually dependent knowledge of each person caught in the process and depends in the long run on the work they do together. Culture is not so much a product of sharing as a product of 'hammering each other into shape' with the well-structured tools already available. TD offers the possibility of a coherence that does not leak because it is not a cultural container and requiring no need for hammering. It offers the possibility of emancipation from well-worn rituals the purposes of which have been forgotten. It does not destroy disciplines but seeks to release them from too rigid containment.

Hasse (2015) sees the researcher in some form as ethnographer. Resonating with Joseph's Campbell's work, the researcher is 'the *radical other* in the empirical field' (2015:199). The ethnographer participates in the very life of the culture but *with a different motive* from the culture's members who are embedded in what have become *self evident connections*, and whose identity and survival is entangled with that of the culture. The anthropologist makes possible an analyses of the culture in order to understand its capacity to enlighten the constructs of human behaviour and thus manipulate or appeal to them for a range of purposes from decreasing the power gap between populations through monopoly of world resources, to solving complex global problems that threaten the future of the planet to ensuring public health policies are inclusive.

Transdisciplinarity and Translator

No anthropologist would be worth their salt if they did not speak about the importance of language but I am not speaking here of linguistics, rather cultural narratives of rituals and practices and the art of translation. If the anthropologist contributes to understanding through research how then is that research used for what matters? The enlightened researcher or ethnographer accepts that the selection of what matters is never value free; the researcher/ethnographer is part of the phenomena being studied and is already influencing the adaptive processes of herself and the members of the culture being entered. Hasse, drawing from Ingold and Barad (2015:15) lays out the task to be carried out. *the expert ethnographer must, as learner, strive to become a culturally informed apparatus that learns what matters in other people's practiced places* Ingold (2011:239) rightly points out

that anthropologists have rarely 'sought to spell out exactly what craftsmanship entails' (Hasse 2015:2). But there are clear indications of anthropologists' insights and understanding of craftsmanship, including their own, through their observations, participations and analyses embodied in the vast amount of materials they continue to produce of these encounters with peoples in situ over time. These include film, texts and objects of significant scholarship ranging from witchcraft to kinship, from child rearing to social and economic transactions. Margaret Mead was not alone in analysing her observations in terms of craftsmanship and how people learn through symbolic and utility relationships to objects influencing, in her case, the thinking of several eminent psychologists of the 20th century (Gerhardt 1995, Maguire 2015a).

In my proposal of transdisciplinarity as an anthropological approach to global learning, I see the prefix as key to the role of the disseminator whether teacher, researcher or analyst. In my conceptualisation, the disseminator is not the replicator of cultural epistemes, but a translator across different cultures of beliefs and practices whose key purpose is the cross pollination of different knowledges to arrive at knowing as a way of being in the world by addressing ignorance. The translator achieves this through an array of hermesian tricks: metaphor, imagery, re-contextualisation, narratives, myths, archetypes. The expert translator is one of the conditions needed for understanding to take place (Gadamer 2013). The translator recognises that their role and location is as Duarte et al (2006) describe not

one that would take us into the terrain of epistemology, the ground where knowledges are produced and transmitted and hence into the heart of "ghostly" disciplinarity. We propose therefore that we call – to stick to terminological coherence – knowledgescape the migration of ideas, concepts and methods across disciplinary bounds that increasingly characterise the field where research in the humanities is staked out today (2006:4).

Therefore I see the key figure in TD as the hermeneut (Maguire 2015b), the skilled conduit bridging different realms of experience with a range of attributes including those proposed by Hasse required for the expert anthropologist/ethnographer. Returning to Goethe's words on language at the beginning of this chapter and recontextualising them for a contemporary world, a foreign language can be seen as Bakhtin's notion of heteroglossia described here by Greenall (2006:70)

Heteroglossia or multivoicedness, is a concept which links up with the ... idea of social meaning – creating activity as a negotiative activity; whenever we negotiate and hence (re-)

create meaning, we always leave a trace of our influence, a trace of our voice ...this means that texts and discourses become choirs of voices we leave behind: they become heteroglossic.

The hermeneut/translator requires the capacity to accumulate and hold multiple voices and traces, a foreign language, not only in terms of texts but of the varieties of artistic expression which are as much a defining feature of human expression as text. For the anthropologist *the art of cultural translation consists in oscillating between distance and nearness, between one's own concepts and the native ones, or – to put it differently – making the exotic familiar and the familiar exotic* (Eriksen 2009 :34) and thus avoiding the straightjacket of reality bounded by *homeblindness* (ibid) .

Returning to Einstein's *Make everything as simple as possible. But not simpler* I like to think it refers to the beauty of distillation another skill of the gifted translator. Einstein, a master translator himself, offered us perhaps the greatest distillation of knowledge which, as well as being an equation of the highly complex theory of relativity, has become a metaphor for the extraordinary capacity of the human being to evolve and adapt if we embrace the complexity of the universe rather than attempt to control our fear of it. The facilitator of research needs to distil a range of knowledges and to communicate them in a way that is simpler but not simple. Metaphor, images, mapping are distillation tools. Skilled distillation provides the key to doors which we would not normally open because our rituals and beliefs are embedded in our historical particularities. Einstein's equation made our relationship with that which exists outside of our own planet possible for everyone not just for scientists. It was an opening up to the interconnectedness of things.

The Value of Ignorance

The anthropologist has an enlightened view of ignorance appropriate to the contemporary world and that is a positioning of ignorance as the tool of awareness. Ignorance has come to be a pejorative term in English. Returning to its Latin root of 'not knowing', as not in awareness (gnarus :aware) it can be seen not only as a motivation to know but a position to take in order to become aware which requires challenging one's own homeblindness (not in awareness) in order to understand the other.

The anthropologist as researcher starts from a position of positive ignorance, *a basic condition for an ethnographer ...and a professional value* (Hasse 2015:269,270). This is ignorance that is open to learning *of or about* the thing as much as possible without prejudice. The anthropologist as a facilitator of awareness between difference, the

hermeneut, uses their skills to increase awareness 'between' things through accumulated knowledge of what arises from multiple exchanges across differences. One could postulate that just as the success of an algorithm is dependent on the constant updating of the quality of human data and skill that is fed into it so then is the 'success' of research as suggested above dependent on the quality and experience of input from the research facilitator as hermeneut 'between' and the researcher as ethnographer and hermeneut 'within'. For the research facilitator within higher education today this requires a constantly deepening awareness of the purpose and methods of our own professional practice and how it might challenge the cultural ecology in which we function to undergo its own adaptive processes to meet the imperatives of the wider and more powerful systems in which it operates. This adaptation needs to be beyond compliance which can replicate increasingly redundant approaches to the generation of new thinking that does not totally destabilise the ecology but makes it more resilient and creative. An anthropological approach cannot force systems to use awareness well, it can only offer the rich data that can make it confident in its stability in a less confining way. This tension between compliance and creativity has provoked responses by some educators to use the term *epistemologies of ignorance* to describe the dominant knowledge paradigms that continue to replicate rituals of thinking to guard the stability of the cultural ecology. Malewski and Jaramillo (2011:2), for example, call for *emerging scholars in education to question ignorance, as the active production of 'unknowing' in order to keep in motion "the way things are" instead of thinking about "the ways things could be"*.

Learning purpose

Our relationship with objects and materials, including theoretical objects and materials such as concepts and paradigms, constitutes practice. Human interaction with the constituents of environments is the seedbed of human learning. Is this the learning that we need for the future? Can we create and use the connectivity of globalisation more creatively through challenging existing formulations? Morton (2013:2) has posed a re-conceptualization and re-contextualisation of the objects with which TD also concerns itself: high impact problems like global warming, exclusive ideologies, social injustice. This interests us as facilitators of learning through research. Morton challenges not only our definitions of objects but our relationships to them and thereby our learning from those interactions. He redefines the objects that matter as hyperobjects. His position resonates with attempts by transdisciplinarity and anthropology to have more meaningful dialogues with complexity, dialogues which cannot be supported by the ritualistic thinking to which philosophy is also

prone. He grasps the notion that there exist objects in our world that impact our lives, our very existence but are *massively distributed in time and space relative to humans* (Morton 2013:1). Examples might be a biosphere such as the rainforest or nuclear materials, eternal plastic forms or ideologies.

Hyperobjects have numerous properties in common. They are viscous, which means they "stick" to beings that are involved in them. They are nonlocal; in other words, any "local manifestation" of a hyperobject is not directly a hyperobject. ...they involve profoundly different temporalities than the human scale ones we are used to ...hyperobjects occupy a high-dimensional phase space that results in their being invisible to humans for stretches of timeThe hyperobject is not a function of our knowledge... They have exposed the weakness between the phenomenon and the thing which the hyperobject makes disturbingly visible (ibid:1,2).

This is an example of how language itself is a ritual which can inhibit how we perceive and conceptualise 'things' and our relationship to them and can also be the device by which a new ritual of thinking can emerge and dominate. It requires of the translator a willingness to conceptualise boldly, which for Morton is in a non-anthropocentric way, and to be open to evolving 'tricks' to enhance understanding with and between objects from the human to the solar system. For him intersubjectivity can only be understood if it does not exclude the media that organise and transmit human information *such as classrooms and cell phones and markets*. Intersubjectivity is *a particular instance of interobjectivity* (ibid:81,82). He uses 'mesh' to describe what an anthropologist or proponent of TD may call layered contexts, complexity, metissage, networks to explain the nuances of our relationships to objects and to offer conceptual frameworks for extracting and organising learning from the interplay between the constituents of our environments including materials, objects, peoples, phenomena, paradigms, events, beliefs, histories. That interplay is our practice and practices are the cohesive threads of identity and belonging. At times the purpose of learning, like the unwatched quantum object, can be fuzzy until close observation brings it into reality.

What then is this purpose of learning and indeed of global learning which we need to observe closely if we are in roles which intend to facilitate its extraction through engagement with research in and across the world's cultural ecologies? The world is the object and our learning arises from our relationship to it. This hyperobject contains many smaller objects constituted as cultural ecologies which have become increasingly interlinked. TD as a global anthropology of learning has something to say about the intention of

learning and the knowledge it produces to resolve local, regional and global problems. It does this through a focus on understanding the understanding of each partner in the interdependency, circumventing any one dominant paradigm by inclusion of many voices to arrive at benefits for a range of stakeholders that does not marginalise the traditionally less affluent, less voiced members of society in favour of the political and financial coloniser. In terms of higher education and research in cultural ecologies outside of the cultural ecology of the university, it offers firstly a conceptualisation of the context of the location and the embedded practices that take place there to inform a set of research strategies, including how and with whom, for the most relevant outcome and impact that will not destabilise the whole ecology. Secondly, such an approach through a TD conceptualisation enhances the chances of the research being an agent of capacity building in adaptive processing in interconnected ecologies or what, in academic circles, is amorously referred to as 'contributions to professional knowledge.' This requires of those tasked with facilitating such research to undertake that which is also expected of their developing researchers - an increased awareness of what informs their own practice and of what is required to practice with an attitude of responsibility and multivoicedness. Institutes of higher education can offer fertile acreage for learning about embedded rituals, silos, resistance to change, reactive vision and out of awareness strategies that can alienate its own members. There is no finality of learning and understanding yet. The variables in the human condition are multiple and learning can be harnessed for different motivations and intentions. If higher education, as embodied in universities, is to have an influential position in the interconnectedness of things, a situation which is both increasing and reducing cultural ecologies' adaptive processing abilities, it needs to open up to the possibilities of other ways of thinking and doing.

TD as a global anthropology of learning is only one of the emergent responses to the complexity of knowledge growth and its purpose. TD is for the moment a conceptualisation of how to influence complex adaptive practices to increase the potential for a more stable and inclusive connectivity which are the neural pathways of global learning.

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